

Serial No. 09/846,254
Reply to Office Action of September 9, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A network having a plurality of nodes connected by a digital data communication link, comprising:
an event channel adapted to transfer an event between a publisher node and a subscriber node within said network over the communication link;
a filter on said subscriber node to identify process a plurality of events published on said event channel to identify said event as a matching event on said subscriber node, wherein said matching event includes at least one pattern field that matches a filter field within said filter; and
an application on said subscriber node to receive said matching event according to said filter, wherein said application defines said filter fields within said filter and opens said event channel at said subscriber node.
2. (currently amended) The network of claim 1, further comprising an event server on said subscriber node, said event server adapted to receive said event and to pass said received event to said filter from said event channel.
3. (currently amended) The network of claim 2, wherein said event server exchanges information with another event server on another one of the nodes of the network.
4. (original) The network of claim 2, wherein said application opens said event channel through said event server.
5. (canceled)
6. (currently amended) The network of claim ~~[[5]]~~ 1, wherein said event further includes a data field.

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7. (original) The network of claim 1, wherein said event channel has a unique name.
8. (original) The network of claim 7, wherein said unique name is registered in a naming service within said network.
9. (original) The network of claim 2, wherein said publisher node has a configuration, said configuration being known to said event server on said subscriber node.
10. (original) The network of claim 1, further comprising an event server on said publisher node, wherein said event server publishes said event on said event channel.
11. (original) The network of claim 10, wherein said subscriber node has a configuration, said configuration being known to said event server on said publisher node.
12. (currently amended) A node within a network to exchange information, comprising:
 - an application running on the node;
 - an event server adapted to receive [[an]] events from an event channel on a communication link, wherein said event server includes an event control block to subscribe to said event channel for said application; and
 - a filter to identify matching ones of said events for use by said application[[.]] wherein said filter is assigned by said application. said event includes at least one pattern field, said at least one pattern field matches at least one filter field within said filter, and said event is placed in a queue on said node by said event server prior to the use by said application.
13. (canceled)

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14. (currently amended) The node of claim ~~[[13]]~~ 12, wherein said event server further includes an event control manager to control said event control block.
15. (original) The node of claim 14, wherein said event control manager updates said event control block.
16. (original) The node of claim 14, wherein said event control manager detects an overload condition within said event control block.
17. (original) The node of claim 14, wherein said event control manager controls a configuration of said event control block.
18. (currently amended) The node of claim ~~[[13]]~~ 12, wherein said event server further includes an event protocol module to manage network connections to said event control block.
19. (currently amended) The node of claim ~~[[13]]~~ 12, wherein said event control block includes a remote event control block that correlates to an event control block.
20. (currently amended) The node of claim ~~[[13]]~~ 12, wherein said event server includes an event channel descriptor to access said event control block for said client application.
21. (original) The node of claim 12, further comprising an event application program interface to publish and subscribe to said event channel.
22. (original) The node of claim 12, wherein said event is processed by said application.

Claims 23-32 (canceled)

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33. (currently amended) A method for receiving information at a node, comprising:
- opening an event channel at said node, said event channel providing a shared communication path on a digital data communication link with other of said nodes;
 - subscribing to receive events at the node over via the event channel;
 - with an application running on the node, assigning a filter to said event channel; [[and]]
 - receiving an event on said event channel;
 - processing said event at said node to determine whether the received event is a match according to said filter[.]; and
 - when determined a match, passing the received event to the application on the node.
34. (original) The method of claim 33, further comprising registering a function indicating said opened event channel.
35. (original) The method of claim 33, further comprising publishing said event on said event channel.
36. (original) The method of claim 33, further comprising dispatching a callback responding to said event.
37. (currently amended) The method of claim 33, further comprising creating said event channel by operation of an event server running on the node.
38. (original) The method of claim 33, further comprising filtering said event by said filter.
39. (original) The method of claim 38, wherein said filtering includes matching a pattern within said event with a filter pattern within said filter.

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40. (original) The method of claim 33, further comprising storing said event at an event control block.

Claims 41-42 (canceled)

43. (currently amended) The method of claim ~~[[42]]~~ 33, wherein said subscribing includes invoking an event control block.

Claims 44-61 (canceled)

62. (currently amended) A method for declaring a node to an event server, comprising:

providing an event server on a node of a computer network;

granting the event server access to an event channel provided on a digital data communications link;

updating an event control block in said event server reflecting said granted access, wherein the granted access corresponds to an application running on the node; and

with the event server, sending a filter control message over the event channel to another event server at another node.

63. (original) The method of claim 62, further comprising allocating said event control block.

64. (original) The method of claim 62, further comprising finding said event control block on said event server.

65. (original) The method of claim 62, further comprising getting a naming context for said event channel.

66. (original) The method of claim 62, further comprising creating a naming context for said event channel.

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67. (original) The method of claim 62, further comprising unlocking said event control block.

68. (original) The method of claim 62, further comprising changing an access permission to said event channel.

69. (original) The method of claim 62, further comprising returning to an application at said node.

70. (original) A method for implementing distributed filtering at a node, comprising:

- building a filter from a plurality of search trees;
- receiving an event at said node;
- selecting a search tree from said filter; and
- comparing said event with said search tree.

71. (original) The method of claim 70, further comprising building said plurality of search trees.

72. (original) The method of claim 71, further comprising placing heads from said plurality of search trees within said filter.

73. (original) The method of claim 70, further comprising modifying said search trees.

74. (original) A method for source filtering at an event server on a publisher node within a network, comprising:

- sending a filter control message to said publisher node;
- marking a remote event control block object in an event control block according to said filter control message; and
- filtering events from said event control block.

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75. (original) The method of claim 74, further comprising building said filter control message.
76. (original) The method of claim 75, further comprising selecting a filter search tree.
77. (original) The method of claim 76, further comprising modifying said filter search tree.
78. (original) The method of claim 74, further comprising changing access permissions to a remote event control block and re-sending said filter control message.
79. (original) The method of claim 74, further comprising unmarking said remote event control block object.
80. (currently amended) A method for receiving information at a node, comprising:
- opening an event channel with a client application running on said node, the client application opening said event channel in a write mode or a read mode, wherein the client application can publish events over the event channel in said write mode and can receive events published on the event channel in said read mode;
- receiving an event from ~~[[an]]~~ said event channel at said node; ~~[[and]]~~
- assigning a filter to said event channel by said client application running on said node; and
- filtering said event from said event channel with ~~[[a]]~~ said filter corresponding to ~~[[an application]]~~ at said node.
- Claims 81-84 (canceled)
85. (currently amended) The method of claim 80, further comprising queuing said event in an event control block at said node corresponding to said application.

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86. (original) The method of claim 80, further comprising dropping said event during an overload condition at said node.

Claims 87-90 (canceled)

91. (original) A computer program product comprising a computer useable medium having computer readable code embodied therein for implementing distributed filtering at a node, the computer program product adapted when run on a computer to effect steps, including:

- building a filter from a plurality of search trees;
- receiving an event at said node;
- selecting a search tree from said filter; and
- comparing said event with said search tree.

Claims 92-93 (canceled)

94. (new) The network of claim 1, further comprising a plurality of additional publishers nodes linked to the event channel transferring publishing events on the event channel and a plurality of additional subscriber nodes linked to the event channel, each of the additional subscriber nodes comprising a filter defined by an application on the additional subscriber node with filter fields for use in processing said published events to identify matching events based on the filter fields.